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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/451,628	11/30/1999	AVI TEPMAN	AMAT/4285/MD	9301

32588 7590 10/28/2003  
APPLIED MATERIALS, INC.  
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SANTA CLARA, CA 95050

EXAMINER
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ALEJANDRO MULERO, LUZ L

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 10/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/451,628	TEPMAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Luz L. Alejandro	1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,8,11-16,18-22,28-34,36 and 37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,8,11-16,18-22,28-34,36 and 37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 30-34 and 36-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 30, lines 2, 5, 8, the phrase "processing positions" is not clear since the transfer chamber does not perform any processing. Is applicant trying to claim "process access ports"?

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 8, 11-16, 18-19, and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mooring et al., WO 99/03133 in view of Rubin et al., U.S. Patent 4,852,516.

Mooring et al. shows the invention as claimed including an apparatus for processing substrates comprising: a transfer chamber 22 comprising one or more access ports 28; one or more load lock chambers 18 disposable about the transfer chamber; one or more process chambers 14 disposable about the transfer chamber; a plumbing tray 44 disposable adjacent the transfer chamber and having facility connections for each process chamber and load lock chamber; and a chamber tray disposable adjacent each process chamber, load lock chamber and transfer chamber, the chamber tray in fluid communication with the facility connections of the plumbing tray, wherein each process chamber is disposable on each chamber tray (see figures 1-4 and page 6, line 25 to page 10, line 20).

Mooring et al. fails to expressly disclose the chamber trays each having a plurality of facility connections that are in fluid communication with the facility connections of the plumbing tray.

Rubin et al. discloses a chamber tray having a plurality of facility connections including links which include water lines, gas lines, vacuum lines, drain lines, and communication lines (see col. 1-line 7 to col. 8-line 60). In view of this disclosure, it

would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Mooring et al. so as to include a chamber tray having a plurality of facility connections which are in fluid communication with the facility connections of the plumbing tray because this will enable each chamber unit to function as a stand alone unit.

With respect to the rollable members, Rubin et al. discloses rollable support members 110 in a support frame 102 of a modular apparatus (see fig. 1 and col. 3-line 63 to col. 4-line 16). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Mooring et al. so as to include the rollable support members of Rubin et al. because this allows for easier removal and insertion of the modular components of the apparatus.

Claims 20, 30-34 and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mooring et al., WO 99/03133 in view of Rubin et al., U.S. Patent 4,852,516 as applied to claims 1, 8, 11-16, 18-19, and 28-29 above, and further in view of Lane et al., EP 0,843,340 A2.

Mooring et al. and Rubin et al. are applied as above but fail to expressly disclose two robots located within the transfer chamber and operable in tandem to transfer a pair of substrates through the processing positions so that the pair of substrates can be processed simultaneously or nearly simultaneously. Lane et al. discloses a transfer chamber wafer handler 500 that includes two robots located within the transfer chamber and operable in tandem to transfer a pair of substrates through the processing positions

so that the pair of substrates can be processed simultaneously or nearly simultaneously (see, for example, figs. 13 and 15 and their descriptions). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Mooring et al. modified by Rubin et al. so as to include the transfer chamber wafer handler of Lane et al. because this will allow for a higher throughput of the apparatus.

Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mooring et al., WO 99/03133 in view of Rubin et al., U.S. Patent 4,852,516 and Lane et al., EP 0,843,340 A2, as applied to claims 20, 30-34 and 36-37 above, and further in view of Richards, U.S. Patent 4,584,045.

Mooring et al., Rubin et al., and Lane et al. are applied as above but fail to expressly disclose wherein the transfer chamber comprises at least one lift, the lift comprising a support shaft, pedestal, lift assembly, and rotational assembly. Richards discloses a transfer chamber comprising a transfer means 84 which includes a lift, the lift comprising a pedestal, a support shaft, a lift assembly, and a rotational assembly, in order to provide the transfer means with suitable means for the desired movement (see figs. 1-3 and their descriptions). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Mooring et al. modified by Rubin et al. and Lane et al. so as to further comprise the lift means of Richards in order to increase the capability of movement of

the transfer means by providing suitable means for the desired movement of the transfer means.

### ***Response to Arguments***

Applicant's arguments, filed 10/06/03, with respect to the Rubin et al. and the Bright et al. references have been fully considered and are persuasive. Therefore, the rejection under 35 U.S.C. 102(b) over Rubin et al. and the rejections under 35 U.S.C. 103(a) over Rubin et al. and Bright et al. have been withdrawn.

However, applicant's arguments with respect to the rejection of claims 1, 8, 11-16, 18-19 and 28-29 over Mooring et al. in view of Rubin et al., have been fully considered but they are not persuasive. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case the secondary reference, Rubin et al. (see, for example, col. 1-line 7 to col. 3-line 21), clearly provides the suggestion and/or motivation to modify the apparatus of Mooring et al., and therefore the rejection under 35 U.S.C. 103 over the combination of the references is proper and is respectfully maintained.

Additionally, applicant's arguments with respect to the rejection of claims 20-22 under 35 U.S.C. 103 over Mooring et al. in view of Rubin et al. and further in view of Richards have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, new ground(s) of rejections have been made.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luz L. Alejandro whose telephone number is 703-305-4545. The examiner can normally be reached on Monday to Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Mills can be reached on 703-308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Luz L. Alejandro  
Primary Examiner  
Art Unit 1763

October 21, 2003